

Assignment 1	Project Summary
Course	Fullstack Application Development with Node.js + Express.js + React.js - 2020

Project author		
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Project name	Objectives & key results tracker
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1. Short project description (Business needs and system features)

Objectives and key results (**OKR**) is a framework for defining and tracking objectives and their outcomes. It allows companies to track and prioritize major tasks. The application allows an admin(*root*) to register a company and invite employees, create departments and regulate permissions. The system will be developed as a *Single Page Application (SPA)* using **React.js** as front-end along with **ReactContext**, and **Node.js + express** as back-end technologies. Each view will have a distinct URL, and the routing between pages will be done client side using **React Router**. The backend will be implemented as a **REST/JSON API** using JSON data serialization. The application will also use **MongoDB** as a database engine.

The main user roles (actors in UML) are:

- *Anonymous User* – can only view the information pages and register a company with admin(*root*) account
- *Employee* (extends *Anonymous User*) – can manage Objectives in the authorized departments, can manage Key results and link them to objectives. Can list and navigate through the time partitions.
- *TeamLead* (extends *Employee*) – can manage people in his department as well as assign tasks to employees in this department.
- *Admin* (extends *TeamLead*) – can invite people and manage their access, can manage company objectives.
- *Root* (extends *admin*) – can create/delete/change admin accounts.

2. Main Use Cases / Scenarios		
Use case name	Brief Descriptions	Actors Involved
2.1. Sign up	<i>Anonymous User</i> can sign up in the system by providing a valid e-mail address, first and last name, company name and password. This account is a root by default.	<i>Anonymous User</i>
2.2. Sign in	<i>Anonymous User</i> can sign in into the system with an email and a password.	<i>Anonymous User</i>
2.3. Invite	<i>Root</i> and <i>Admin</i> can invite new employees by their emails.	<i>Root, Admin</i>
2.4. List employees	<i>Root, Admin, TeamLead, Employee</i> can list the company members grouped by their department, permissions and status.	<i>Root, Admin, TeamLead, Employee</i>
2.5. Manage employees	The <i>root</i> user can change, promote or demote any other user to admin or vice versa. He can also give employees permissions for other departments. The <i>admin</i> can change employees permissions.	<i>Root, Admin</i>
2.6. Create department	<i>Root, Admin</i> can create and manage new departments.	<i>Root, Admin</i>
2.7. Create Objectives	<i>Root</i> and <i>admin</i> can create objectives on any level including the company one. <i>TeamLead</i> can create objectives only on their department level <i>by default</i> .	<i>Root, Admin, TeamLead</i>
2.8. Create/Attach key results	Any of the objectives can have many related key results. <i>Root, Admin, TeamLead, Employee</i> can create KR and attach them to accessible objectives.	<i>Root, Admin, TeamLead, Employee</i>
2.9. Link objectives	<i>Root, Admin, TeamLead</i> can link Objectives to other objectives in case one depends on the other.	<i>Root, Admin, TeamLead</i>
2.10. Assign objectives	<i>Root, Admin, TeamLead</i> can assign objectives to other members.	<i>Root, Admin, TeamLead</i>

2.11. List Objectives & KR	<i>Root, Admin, TeamLead, Employee</i> can list objectives in their department and in other departments too	<i>Root, Admin, TeamLead, Employee</i>
2.12. Manage boards	<i>Root, Admin</i> can manage the company structure and configure the okr-board for their needs.	<i>Root, Admin</i>
2.13. Navigate throughout the time periods	In the OKR process everything is separated in time periods throughout the year. Every objective is assigned to a time period. <i>Root, Admin, TeamLead, Employee</i> can navigate thru the time partitions.	<i>Root, Admin, TeamLead, Employee</i>

3. Main Views (SPA Frontend)		
View name	Brief Descriptions	URI
3.1. Home	Presents the introductory information for the purpose of the system as well as detailed instructions on how to start using it. Prominently offers the ability to get started by creating an account for free.	/
3.2. Auth	Presents a view allowing the users to sign in or sign up .	/auth/ /auth/sign-in /auth/sign-up
3.3. Members	Presents all of the company members with their User Data (Account created at, role, team)	/members
3.4. Configuration	Presents the configurations for the OKR board. Admins and Root can change the configuration depending on the company needs.	/configuration
3.5. Departments	Presents a list of the company departments with their members	/departments
3.6. Objectives	Presents a view which shows all of the objectives for the current <i>level (department, person, company)</i> . The users can create new Objectives, Destroy others, Link and Assign them.	/objectives/:department, :person, :company
3.7. Objectives (All)	Presents a list of the company's objectives grouped by status and departments	/objectives

3.8. Dashboard	Presents the company progress	<i>/dashboard</i>
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4. API Resources (Node.js Backend)		
Controller name	Brief Descriptions	URI
4.1. Members	GET User Data for all members POST - invites a new member (<i>employee</i>) to the company. Available only for <i>Admins and Root</i> .	<i>/api/members</i>
4.2. Member	GET, PUT, DELETE User Data for a <i>member</i> with specified <i>memberId</i> , according to restrictions described in UCs.	<i>/api/members/:memberId</i>
4.3. Sign in	POST <i>User Credentials</i> (e-mail address and password) and receive a valid <i>Security Token</i> to use in subsequent API requests.	<i>/api/auth/sign-in</i>
4.4. Sign out	POST a sign out request for ending the active session with <i>OKTS</i> , and invalidating the issued <i>Security Token</i> .	<i>/api/auth/sign-out</i>
4.5. Sign up	POST <i>User Credentials</i> (e-mail address, names, company name and password) to register a new company (with only one root member) and receive a valid <i>Security Token</i> to use in subsequent API requests.	<i>/api/auth/sign-up</i>
4.6. Departments	GET - returns all of the departments with the associated information. POST - creates a new department	<i>/api/departments</i>
4.7. Department	GET, PUT, DELETE <i>department information</i> for a <i>department</i> with specified <i>departmentId</i> .	<i>/api/departments/:departmentId</i>
4.8. Objectives	GET - returns all <i>objectives</i> with the associated information. POST - creates a new <i>objective</i> .	<i>/api/objectives</i>
4.9. Objective	GET, PUT, DELETE <i>objective information</i> for an objective with specific <i>objectiveId</i> .	<i>/api/objectives/:objectiveId</i>
4.10. Key results	GET - returns all <i>keyresults</i> with the associated information. POST - creates a new <i>key result</i> .	<i>/api/objectives/:objectiveId/key-results</i>

4.11. Key result	GET, PUT, DELETE <i>key result information</i> for an objective with a specific <i>objectiveId</i> and a <i>key result</i> with a specific <i>key-resultId</i> .	<i>/api/objectives/:objectiveId</i> <i>/key-results/:key-resultId</i>
4.12. Configuration	GET - returns the company board configuration PUT - updates the company configuration	<i>/api/configuration</i>